

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Amendment of the Commission's Rules)
With regard to the 3650-3700 MHz)
Government Transfer Band)

ET Docket No. 98-237

The 4.9 GHz Band Transferred from)
Federal Government Use)

WT Docket No. 00-32 /

PETITION FOR RECONSIDERATION

Lockheed Martin Corporation ("LMC") hereby seeks reconsideration of the Commission's *First Report and Order* in the above-captioned proceeding.¹

I. Introduction and Summary

In December 1998, the Commission released a *Notice of Proposed Rulemaking and Order* proposing to allocate the 3650-3700 MHz band on a primary basis to the terrestrial Fixed Service, while also proposing to grandfather existing Fixed-Satellite Service ("FSS") earth station sites in the band.² At the same time, the Commission imposed a freeze on applications for new and major modifications of earth station facilities in the FSS operating in the extended C-band.³ The Commission later adopted an Order providing partial and immediate relief from the freeze, allowing modifications to existing FCC earth stations and construction of new stations in the extended C-band, as

¹ See *Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band*, ET Dkt. No. 98-237, FCC 00-363, slip op. (released October 24, 2000) ("*First Report and Order* and *Second NPRM*").

² See *Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band*, 14 FCC Rcd 1295 (1998) ("*NPRM*").

³ *Id.*

long as the station is within a ten-mile radius of an existing licensed earth station operating in the extended C-band.⁴

On October 24, 2000, the Commission released its *First Report and Order* and *Second NPRM*, which allocates the extended C-band to non-Government terrestrial Fixed Service (“FS”) and to the Mobile Service, for fixed land-mobile base stations only on a primary basis and grandfathers existing FSS earth station sites in this band. Also, the Commission said that it would accept new applications for FSS earth stations in the vicinity (i.e. within 10 miles) of these grandfathered sites to operate on a co-primary basis only until November 30, 2000. After that date, any new application would be eligible for grant on a secondary basis only regardless of its proximity to a previously licensed site. The sites where new and modified FSS earth stations will be permitted are located in sixteen states and Puerto Rico and Guam; in some cases operation will not include the entire fifty MHz of spectrum between 3650-3700 MHz. As set forth in greater detail in the Extended C-Band Ad Hoc Coalition’s Emergency Motion for Stay Pending Reconsideration,⁵ LMC continues to believe that there is no reasonable ground for the Commission’s decision to treat applications for earth stations located within ten-miles of an existing grandfathered extended C-band site submitted after November 30, 2000 any less favorably than those applications received prior to that date. Indeed, the Commission has not yet advanced any reason, technical or otherwise, for establishing a ten-mile radius at all. Moreover, dedicating 50 MHz in the 3650-3700 MHz band is the wrong approach to furthering competition. As noted by Airspan earlier in this proceeding, “the proposed allocation of the 3650-3700 MHz band for Fixed Wireless

⁴ *Amendment of the Commission’s Rules with Regard to the 3650-3700 MHz Government Transfer Band*, FCC 00-181 (May 17, 2000).

⁵ Emergency Motion for Stay Pending Reconsideration, ET Docket No. 98-237, filed November 28, 2000.

Access would discourage rather than encourage the near term introduction of wireless communications”⁶ The public interest simply will not be served by placing undue constraints on FSS expansion, or causing a disruption of existing services to accommodate a new service that may not be technically or commercially viable in this very narrow bandwidth.

II. Request for Reconsideration

In addition to strongly supporting the Extended C-Band Ad Hoc Coalition’ Petition for Reconsideration, which will be filed simultaneously today, LMC chooses to emphasize three essential points that require the Commission’s careful reconsideration. First, new antennas located within 10 miles of grandfathered FSS/TT&C sites should be co-primary. Secondly, LMC opposes the Commission’s restriction of grandfathered TT&C sites to frequencies for which the earth stations are currently licensed. Third, the Commission’s substitution of 50 MHz in the 3650-3700 MHz band for 15 MHz in the 1990-2110 MHz band for MS base stations appears to be arbitrary and technically unwarranted. In addition, LMC requests clarification of the Commission’s conclusion that the 3600-3650 MHz portion of the extended C-band remains “available” for FSS use.

A. New FSS Earth Stations Located Within 10 Miles Of Existing Grandfathered FSS/TT&C Sites Or New Antennas At Existing Sites Should Also Be Co-Primary.

LMC supports the Commission’s decision to grandfather existing FSS earth stations and TT&C earth station sites. However, there are no public interest reasons nor any technical rationale for the Commission to restrict to secondary status any earth stations at new sites or new antennas at existing sites that are within 10 miles of these

⁶ Comments of Airspan at 1 (filed February 16, 1999).

grandfathered sites.⁷ These new stations or new antennas should not place any more undue constraints on fixed stations within the coordination zones in order to coordinate on a co-primary basis. Indeed the Commission has not provided a technical rationale for the initial ten-mile radius in any of its decisions in this proceeding. Imposition of such a severe limitation on FSS without record support is particularly unwarranted in that the service being constrained is already operational in the band, and the utility of operational space segment facilities is being placed at risk.

The Commission's action to permit new FSS earth station sites only on a secondary basis⁸ does not provide any real relief to the FSS operators. And this action will not help alleviate congestion in the adjacent 3700-4200 MHz band since it is highly doubtful that any FSS operator would make the large investment needed for new earth stations that cannot be protected from harmful interference under secondary status. Before constraining service in such fashion, the Commission should have endeavored to determine through technical studies the degree to which co-primary FSS and Fixed Service operations could co-exist.

Moreover, there is also no basis for the Commission to distinguish treatment of FSS facilities based on whether the applications for such facilities were filed before or after November 30, 2000. Operation of facilities that are within the designated ten mile radius would impose no more substantial constraint on the potential development of Fixed Service uses whether filed before or after this arbitrary deadline. Accordingly, the Commission should reconsider this aspect of the *First Report and Order*, and should not subject to treatment as secondary any facilities application filed on or after December 1, 2000.

⁷ *Id.* at 14-15 (¶ 30).

⁸ *Id.* at 14-15 (¶ 30).

B. The Commission Should Reconsider Its Restriction Of Grandfathered TT&C Sites To Frequencies For Which The Earth Station Is Currently Licensed.

Although LMC supports the Commission's decision to grandfather existing earth station sites used to provide TT&C, we strongly oppose the Commission's restriction⁹ of this grandfather protection to only existing TT&C frequencies for which the earth stations are currently licensed. Using the coordination procedures in Part 25 of the rules, as proposed in the Second Notice, should avoid harmful interference to terrestrial and TT&C operations and eliminate any technical basis for this restriction.

Modifications to add new frequencies at existing (or new) TT&C sites should be acceptable, subject only to coordination. TT&C sites operating within the 3650-3700 MHz band must be allowed flexibility to service new or changing customer requirements when operating with existing or new spacecraft. Restricting TT&C sites to frequencies currently licensed can severely curtail a customer's choice of TT&C sites available to support particular spacecraft, with the end result of stifling new satellite service offerings, increasing customer costs, and limiting competition for TT&C services. Because of the mission-critical nature of TT&C links, secondary operation is untenable.

Depending on a customer's satellite design and service offerings, TT&C support may require earth station changes in frequency, or power levels. Indeed, depending on circumstances such as TT&C site availability, a customer requiring TT&C support may be extremely limited with access to only one or a few TT&C earth stations within the United States. Therefore it is essential that TT&C sites in the 3650-3700 MHz band retain the flexibility, upon proper coordination, to change their frequencies and power levels.

⁹ *Id.* at 15 (¶ 31).

C. The Commission Should Reconsider Its List of Grandfathered FSS Earth Stations To Include Existing C-band Sites That Have Been Modified Or Are Planned For Operation In The Extended C-band.

The Commission's limited list of grandfathered FSS earth stations does not include existing C-band sites which have been modified or planned for operation in the extended C-band but do not yet have licensed services in operation.¹⁰ Excluding these sites, or designating them to secondary status, will severely impact the expansion of existing services and growth of new services, since the conventional C-band is filled to capacity. Moreover, the Commission's list does not include several transportable earth stations deployed throughout the U.S.

The 3650-3700 MHz band has been planned for FSS operation for some time; significant sums of money have been invested in INTELSAT satellites for operation in this band. Restricting existing C-band sites from operating in the 3650-3700 MHz band will severely impact planned growth and render critical space segment capacity unusable. Most importantly, planned customer services will be forfeited and customer service options will be severely reduced. Therefore, LMC urges the Commission to reconsider its decision and to allow a period of one year from the release date of the First Report and Order for earth station licensees at existing C-band sites to file for license modification to use the extended C-band. Given the average growth rate at Extended C-Band, LMC anticipates that not all of these existing sites will need to include the 3650-3700 MHz band on a primary basis, but it is vital that those needing to add this band be permitted to do so after appropriate coordination with FS and MS operations.

¹⁰ See id. at 75-78.

D. The Commission's Substitution Of 50 MHz In The 3650-3700 MHz Band For 15 MHz In The 1990-2110 MHz Band For MS Base Stations Appears To Be Arbitrary And Technically Unwarranted.

The Commission allocated the 3650-3700 MHz band to Mobile Service (MS) usage primarily to supplement a 15 MHz shortfall in the 1990-2110 MHz spectrum under the Balanced Budget Act of 1997 ("BBA").¹¹ However, substituting 50 MHz of scarce C-band FSS spectrum for 15 MHz of S-band MSS spectrum in order to fulfill the obligations of the BBA appear to be arbitrary and without technical merit.

The Commission's "technical" rationale for substituting 50 MHz in the 3650-3700 MHz band for 15 MHz in the 1990-2100 MHz band is flawed, and the substitution of 50 MHz of bandwidth is unwarranted. Although the Commission correctly recognized the existence of increased path loss at 3650-3700 MHz,¹² it did not take into account the increase in antenna gain at 3650-3700 MHz (assuming identical antennas) that "offsets" path losses incurred at the lower band of 1990-2100 MHz. For example, there is over three times (approximately 5 dB) more gain available from an antenna at 3650 MHz than from an identical antenna at 1990 MHz. This increase in antenna gain is comparable to the path loss incurred.¹³

Without a valid supporting technical reason, the Commission should reconsider its allocation of 50 MHz to MS in the 3650-3700 MHz band and consider allocation of 15 MHz of spectrum as more consistent with the mandate of the BBA.

¹¹ See *Id.* at 10 (¶ 19).

¹² See *Id.* at 11 (¶ 19); taking into account differences in propagation characteristics between the two bands.

¹³ Without increasing the bandwidth, a higher gain antenna would cause an increase in the eirp density level. An increased eirp density level may make it more difficult to coordinate in particular cases.

E. The Commission Should Clarify Its Statements on the "Availability" of the 3600-3650 MHz band.

Finally, LMC observes that the Commission noted in its *First Report and Order* that the 3600-3650 MHz band remains "available" for FSS earth station operations on a primary basis.¹⁴ LMC seeks "clarification" of this statement. Even though the allocation tables indicate 3600-3700 MHz as allocated to FSS (non-Government) on a co-primary basis, the NTIA has essentially barred FSS from this lower portion of the band (3600-3650 MHz) in the United States. Therefore, LMC asks that the Commission clarify on what basis and terms these frequencies remain "available" for FSS use.

III. Conclusion

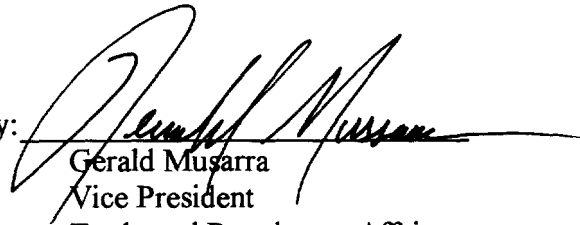
As discussed above, LMC urges the Commission to reconsider its initial order in this proceeding as outlined above. The FSS industry, both operators and customers, has sunk large investments in FSS spacecraft and earth stations that will now be stranded and critical capacity shortages will be left unaddressed unless the Commission provides the relief requested.

Respectfully submitted,

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¹⁴ *Id.* at 12 (¶ 21).